



October 30, 2009

Duke Energy  
Miami Fort Generating Station  
11021 Brower Road  
North Bend, OH 45052

Attention: Ms. Sue Wallace  
Chemical Engineer

Re: Results – **October 2009**  
Low-Level Mercury Sampling  
Miami Fort Generating Station  
North Bend, Ohio

In accordance with your request, URS prepared the following letter report transmitting low-level mercury test results for samples collected at the Miami Fort Generating Station located in North Bend, Ohio.

The scope of work involved the sampling of intake and discharge waters from the following sources and analysis of those samples for low-level mercury.

1. River Intake
2. Station 601 (WWT Influent)  
[Samples were collected at this station one detention time before samples collected at Outfall 608]
3. Outfall 608 (WWT Effluent)  
[Samples were collected at this outfall one detention time after samples collected at station 601]

Each sample was collected following the required Method 1669: *Sampling Ambient Water for Determination of Trace Metals at EPA Water Quality Criteria Levels* (Sampling Method) and analyzed by Method 1631. At the request of Duke Energy, total metal mercury samples were collected from Station 601 and analyzed by Method 7470A.

Field staff from URS' Cincinnati office conducted the sampling and TestAmerica Laboratories Inc. located in North Canton, Ohio performed the analytical procedures. The analytical procedures included the analyses of a collected sample and duplicate sample (duplicate collected at Outfall 608), field blank (field blanks collected at the River Intake and Outfall 608), and trip blank.

The results from the initial **October 1-2, 2009** sampling event are presented in the attached Table 1. A copy of the laboratory report is enclosed with this letter.



Duke Energy  
October 30, 2009  
Page 2

--ooOoo--

URS is pleased to provide continued assistance to Duke Energy in the execution of their environmental monitoring requirements. If there are any questions regarding the content of this report, please do not hesitate to contact the undersigned.

Sincerely,

URS Corporation

A handwritten signature in blue ink, appearing to read "Michael A. Wagner".

Michael A. Wagner  
Project Manager

A handwritten signature in blue ink, appearing to read "Dennis P. Connair".

Dennis P. Connair, C.P.G.  
Principal

MAW/DPC/Duke Energy-MFS LL Hg 2009  
Job No. 14948701

TABLE 1

ANALYTICAL RESULTS  
LOW-LEVEL MERCURY  
RIVER INTAKE, STATION 601, OUTFALL 608, AND OUTFALL 002 (POND B)  
  
DUKE ENERGY - MIAMI FORT STATION  
NORTH BEND, OHIO

Sample ID	7/1/09	8/3/09	Date Sampled / Results (ug/L, parts per trillion)	9/1/09	9/21/09	10/1/09	11/X/2009	12/X/2009
River Intake	2.3	8.6 B		2.0	NSC	2.3		
Station 601 (7)	224,000	226,000		NSC	62,400	186,000		
Station 601 (7)*	NSC	4,600*		58,200*	8,900*	374,000*		
Station 601 (7)* [duplicate]	NSC	NSC		NSC	NSC	381,000*		
Station 601 (8)	260,000	956,000		NSC	73,000	237,000		
Station 601 (8)*	NSC	4,800*		172,000*	314,000*	447,000*		
Station 601 (8)*[duplicate]	NSC	NSC		NSC	41,600*	NSC		
Outfall 608	110	123 B		63.4	57.7	79.2		
Outfall 608 [duplicate]	108	122 B		62.2	58.2	87.1		
APB-002	NC	5.8		2.5	NSC	3.6		
APB-002 [duplicate]	NC	5.3		2.4	NSC	3.8		
Field Blank (RI-FB)	<0.50	2.8		<0.50	NSC	<0.50		
Field Blank (WWTF-FB)	<0.50	1.0		0.72	<0.50	0.89		
Field Blank (AP-FB)	NC	<0.50		<0.50	NSC	<0.50		
Trip Blank	<0.50	<0.50		<0.50	<0.50	<0.50		

Samples collected by URS

Samples analyzed by TestAmerica of North Canton, Ohio

NC - Not Collected. (Ash Pond B Outfall 002 collected quarterly, August and December)

NSC - No Sample Collected

\* = Total mercury analysis utilizing Method 7470A [results converted from ug/L (parts per billion) to ng/L]

B = Low-level mercury detected in associated field blank collected at sampling location

## ANALYTICAL REPORT

REVISED

PROJECT NO. 14948701.00100

MIAMI FORT LLHG 2009

Lot #: A9J030135

Sue Wallace

Duke Energy Corporation  
PO Box 5385  
Cincinnati, OH 45201

TESTAMERICA LABORATORIES, INC.



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Kenneth J. Kuzior  
Project Manager  
ken.kuzior@testamericainc.com

Approved for release.  
Kenneth J. Kuzior  
Project Manager  
10/29/2009 4:27 PM

October 29, 2009

TestAmerica Laboratories, Inc.

TestAmerica North Canton 4101 Shuffel Street NW, North Canton, OH 44720

Tel (330)497-9396 Fax (330)497-0772 [www.testamericainc.com](http://www.testamericainc.com)



## **CASE NARRATIVE**

A9J030135

The following report contains the analytical results for thirteen water samples and one quality control sample submitted to TestAmerica North Canton by Cinergy from the Miami Fort LLHG 2009 Site, project number 14948701.00100. The samples were received October 03, 2009, according to documented sample acceptance procedures.

TestAmerica utilizes USEPA approved methods in all analytical work. The samples presented in this report were analyzed for the parameter(s) listed on the analytical methods summary page in accordance with the method(s) indicated. Preliminary results were provided to Candance Bonham, Mike Wagner, and Sue Wallace on October 13, 2009. A summary of QC data for these analyses is included at the back of the report.

TestAmerica North Canton attests to the validity of the laboratory data generated by TestAmerica facilities reported herein. All analyses performed by TestAmerica facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the applicable methods. TestAmerica's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

All parameters were evaluated to the reporting limit.

Please refer to the Quality Control Elements Narrative following this case narrative for additional quality control information.

If you have any questions, please call the Project Manager, Kenneth J. Kuzior, at 330-497-9396.

This report is sequentially paginated. The final page of the report is labeled as "END OF REPORT."

## **SUPPLEMENTAL QC INFORMATION**

### **SAMPLE RECEIVING**

The temperature of the cooler upon sample receipt was 17.5°C, with wet ice present.

## **CASE NARRATIVE (continued)**

### **SAMPLE RECEIVING (continued)**

See TestAmerica's Cooler Receipt Form for additional information.

### **METALS**

The analytical results met the requirements of the laboratory's QA/QC program.

## QUALITY CONTROL ELEMENTS NARRATIVE

TestAmerica conducts a quality assurance/quality control (QA/QC) program designed to provide scientifically valid and legally defensible data. Toward this end, several types of quality control indicators are incorporated into the QA/QC program, which is described in detail in QA Policy, QA-003. These indicators are introduced into the sample testing process to provide a mechanism for the assessment of the analytical data. Program or agency specific requirements take precedence over the requirements listed in this narrative.

### QC BATCH

Environmental samples are taken through the testing process in groups called QUALITY CONTROL BATCHES (QC batches). A QC batch contains up to twenty environmental samples of a similar matrix (water, soil) that are processed using the same reagents and standards. TestAmerica North Canton requires that each environmental sample be associated with a QC batch.

Several quality control samples are included in each QC batch and are processed identically to the twenty environmental samples.

For SW846/RCRA methods, QC samples include a METHOD BLANK (MB), a LABORATORY CONTROL SAMPLE (LCS) and, where appropriate, a MATRIX SPIKE/MATRIX SPIKE DUPLICATE (MS/MSD) pair or a MATRIX SPIKE/SAMPLE DUPLICATE (MS/DU) pair. If there is insufficient sample to perform an MS/MSD or an MS/DU, then a LABORATORY CONTROL SAMPLE DUPLICATE (LCSD) is included in the QC batch.

For 600 series/CWA methods, QC samples include a METHOD BLANK (MB), a LABORATORY CONTROL SAMPLE (LCS) and, where appropriate, a MATRIX SPIKE (MS). An MS is prepared and analyzed at a 10% frequency for GC Methods and at a 5% frequency for GC/MS methods.

### LABORATORY CONTROL SAMPLE

The Laboratory Control Sample is a QC sample that is created by adding known concentrations of a full or partial set of target analytes to a matrix similar to that of the environmental samples in the QC batch. Multi peak responders may not be included in the target spike list due to co-elution. The LCS analyte recovery results are used to monitor the analytical process and provide evidence that the laboratory is performing the method within acceptable guidelines. All control analytes indicated by a bold type in the LCS must meet acceptance criteria. Failure to meet the established recovery guidelines requires the repretreatment and reanalysis of all samples in the QC batch. Comparison of only the failed parameters from the first batch are evaluated. The only exception to the rework requirement is that if the LCS recoveries are biased high and the associated sample is ND (non-detected) for the parameter(s) of interest, the batch is acceptable.

At times, a Laboratory Control Sample Duplicate (LCSD) is also included in the QC batch. An LCSD is a QC sample that is created and handled identically to the LCS. Analyte recovery data from the LCSD is assessed in the same way as that of the LCS. The LCSD recoveries, together with the LCS recoveries, are used to determine the reproducibility (precision) of the analytical system. Precision data are expressed as relative percent differences (RPDs). If the RPD fails for an LCS/LCSD and yet the recoveries are within acceptance criteria, the batch is still acceptable.

### METHOD BLANK

The Method Blank is a QC sample consisting of all the reagents used in analyzing the environmental samples contained in the QC batch. Method Blank results are used to determine if interference or contamination in the analytical system could lead to the reporting of false positive data or elevated analyte concentrations. All target analytes must be below the reporting limits (RL) or the associated sample(s) must be ND except under the following circumstances:

- Common organic contaminants may be present at concentrations up to 5 times the reporting limits. Common metals contaminants may be present at concentrations up to 2 times the reporting limit, or the reported blank concentration must be twenty fold less than the concentration reported in the associated environmental samples. (See common laboratory contaminants listed in the table.)

<b>Volatile (GC or GC/MS)</b>	<b>Semivolatile (GC/MS)</b>	<b>Metals ICP-MS</b>	<b>Metals ICP Trace</b>
Methylene Chloride, Acetone, 2-Butanone	Phthalate Esters	Copper, Iron, Zinc, Lead, Calcium, Magnesium, Potassium, Sodium, Barium, Chromium, Manganese	Copper, Iron, Zinc, Lead

## QUALITY CONTROL ELEMENTS NARRATIVE (continued)

- Organic blanks will be accepted if compounds detected in the blank are present in the associated samples at levels 10 times the blank level. Inorganic blanks will be accepted if elements detected in the blank are present in the associated samples at 20 times the blank level.
- Blanks will be accepted if the compounds/elements detected are not present in any of the associated environmental samples.

Failure to meet these Method Blank criteria requires the reparation and reanalysis of all samples in the QC batch.

### MATRIX SPIKE/MATRIX SPIKE DUPLICATE

A Matrix Spike and a Matrix Spike Duplicate are a pair of environmental samples to which known concentrations of a full or partial set of target analytes are added. The MS/MSD results are determined in the same manner as the results of the environmental sample used to prepare the MS/MSD. The analyte recoveries and the relative percent differences (RPDs) of the recoveries are calculated and used to evaluate the effect of the sample matrix on the analytical results. Due to the potential variability of the matrix of each sample, the MS/MSD results may not have an immediate bearing on any samples except the one spiked; therefore, the associated batch MS/MSD may not reflect the same compounds as the samples contained in the analytical report. When these MS/MSD results fail to meet acceptance criteria, the data is evaluated. If the LCS is within acceptance criteria, the batch is considered acceptable.

For certain methods, a Matrix Spike/Sample Duplicate (MS/DU) may be included in the QC batch in place of the MS/MSD. For the parameters (i.e. pH, ignitability) where it is not possible to prepare a spiked sample, a Sample Duplicate may be included in the QC batch. However, a Sample Duplicate is less likely to provide usable precision statistics depending on the likelihood of finding concentrations below the standard reporting limit. When the Sample Duplicate result fails to meet acceptance criteria, the data is evaluated.

For certain methods (600 series methods/CWA), a Matrix Spike is required in place of a Matrix Spike/Matrix Spike Duplicate (MS/MSD) or Matrix Spike/Sample Duplicate (MS/DU).

The acceptance criteria do not apply to samples that are diluted.

### SURROGATE COMPOUNDS

In addition to these batch-related QC indicators, each organic environmental and QC sample is spiked with surrogate compounds. Surrogates are organic chemicals that behave similarly to the analytes of interest and that are rarely present in the environment. Surrogate recoveries are used to monitor the individual performance of a sample in the analytical system.

If surrogate recoveries are biased high in the LCS, LCSD, or the Method Blank, and the associated sample(s) are ND, the batch is acceptable. Otherwise, if the LCS, LCSD, or Method Blank surrogate(s) fail to meet recovery criteria, the entire sample batch is reprepared and reanalyzed. If the surrogate recoveries are outside criteria for environmental samples, the samples will be reprepared and reanalyzed unless there is objective evidence of matrix interference or if the sample dilution is greater than the threshold outlined in the associated method SOP.

The acceptance criteria do not apply to samples that are diluted. All other surrogate recoveries will be reported.

For the GC/MS BNA methods, the surrogate criterion is that two of the three surrogates for each fraction must meet acceptance criteria. The third surrogate must have a recovery of ten percent or greater.

For the Pesticide and PCB methods, the surrogate criterion is that one of two surrogate compounds must meet acceptance criteria. The second surrogate must have a recovery of 10% or greater.

### TestAmerica Certifications and Approvals:

*The laboratory is certified for the analytes listed on the documents below. These are available upon request.*

California (#01144CA), Connecticut (#PH-0590), Florida (#E87225), Illinois (#200004), Kansas (#E10336), Minnesota (#39-999-348), New Jersey (#OH001), New York (#10975), Nevada (#OH-000482008A), OhioVAP (#CL0024), Pennsylvania (#008), West Virginia (#210), Wisconsin (#999518190), NAVY, ARMY, USDA Soil Permit





# EXECUTIVE SUMMARY - Detection Highlights

A9J030135

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
601 (8) WWT 10/01/09 17:30 001				
Mercury	237000	10000	ng/L	CFR136A 1631E
601 (8) WWT TOT 10/01/09 17:35 002				
Mercury	447	10.0	ug/L	SW846 7470A
601 (7) WWT 10/01/09 17:40 003				
Mercury	186000	10000	ng/L	CFR136A 1631E
601 (7) WWT TOT 10/01/09 17:45 004				
Mercury	374	10.0	ug/L	SW846 7470A
601 (7) WWT TOT DUP 10/01/09 17:50 005				
Mercury	381	10.0	ug/L	SW846 7470A
RI 10/01/09 18:05 007				
Mercury	2.3	0.50	ng/L	CFR136A 1631E
OUTFALL 002 10/01/09 18:30 009				
Mercury	3.6	0.50	ng/L	CFR136A 1631E
OUTFALL 002 DUP 10/01/09 18:35 010				
Mercury	3.8	0.50	ng/L	CFR136A 1631E
608 WWT FB 10/02/09 06:55 011				
Mercury	0.89	0.50	ng/L	CFR136A 1631E
608 WWT 10/02/09 07:00 012				
Mercury	79.2	5.0	ng/L	CFR136A 1631E
608 WWT DUP 10/02/09 07:05 013				
Mercury	87.1	5.0	ng/L	CFR136A 1631E

## ANALYTICAL METHODS SUMMARY

A9J030135

<u>PARAMETER</u>	<u>ANALYTICAL METHOD</u>
Mercury in Liquid Waste (Manual Cold-Vapor)	SW846 7470A
Mercury, Low Level Mercury, CVA Fluorescence	CFR136A 1631E

### References:

- CFR136A "Methods for Organic Chemical Analysis of Municipal and Industrial Wastewater", 40CFR, Part 136, Appendix A, October 26, 1984 and subsequent revisions.
- SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

## SAMPLE SUMMARY

A9J030135

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED	SAMP
			DATE	TIME
LL0ER	001	601 (8) WWT	10/01/09	17:30
LL0ET	002	601 (8) WWT TOT	10/01/09	17:35
LL0EV	003	601 (7) WWT	10/01/09	17:40
LL0EW	004	601 (7) WWT TOT	10/01/09	17:45
LL0EX	005	601 (7) WWT TOT DUP	10/01/09	17:50
LL0E0	006	RIFB	10/01/09	18:00
LL0E3	007	RI	10/01/09	18:05
LL0E5	008	OUTFALL 002 FB	10/01/09	18:20
LL0E6	009	OUTFALL 002	10/01/09	18:30
LL0E9	010	OUTFALL 002 DUP	10/01/09	18:35
LL0FA	011	608 WWT FB	10/02/09	06:55
LL0FD	012	608 WWT	10/02/09	07:00
LL0FE	013	608 WWT DUP	10/02/09	07:05
LL0FF	014	TB (TRIP BLANK)	10/02/09	

### NOTE(S) :

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

Duke Energy Corporation

Client Sample ID: 601 (8) WWT

TOTAL Metals

Lot-Sample #...: A9J030135-001

Matrix.....: WG

Date Sampled...: 10/01/09 17:30 Date Received...: 10/03/09

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>WORK ORDER #</u>
Prep Batch #...: 9279201						
Mercury	237000	10000	ng/L	CFR136A 1631E	10/06-10/09/09	LL0ER1AA
		Dilution Factor: 20000				

Duke Energy Corporation

Client Sample ID: 601 (8) WWT TOT

TOTAL Metals

Lot-Sample #...: A9J030135-002

Matrix.....: WG

Date Sampled...: 10/01/09 17:35 Date Received...: 10/03/09

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>WORK ORDER #</u>
Prep Batch #...: 9278017						
Mercury	447	10.0	ug/L	SW846 7470A	10/05/09	LL0ET1AA
		Dilution Factor: 50				

Duke Energy Corporation

Client Sample ID: 601 (7) WWT

TOTAL Metals

Lot-Sample #...: A9J030135-003

Matrix.....: WG

Date Sampled...: 10/01/09 17:40 Date Received...: 10/03/09

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 9279201						
Mercury	186000	10000	ng/L	CFR136A 1631E	10/06-10/09/09	LL0EV1AA
Dilution Factor: 20000						

Duke Energy Corporation

Client Sample ID: 601 (7) WWT TOT

TOTAL Metals

Lot-Sample #...: A9J030135-004

Matrix.....: WG

Date Sampled...: 10/01/09 17:45 Date Received...: 10/03/09

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u> <u>LIMIT</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION-</u> <u>ANALYSIS DATE</u>	<u>WORK</u> <u>ORDER #</u>
Prep Batch #...: 9278017						
Mercury	374	10.0	ug/L	SW846 7470A	10/05/09	LL0EW1AA

Dilution Factor: 50

Duke Energy Corporation

Client Sample ID: 601 (7) WWT TOT DUP

TOTAL Metals

Lot-Sample #...: A9J030135-005

Matrix.....: WG

Date Sampled...: 10/01/09 17:50 Date Received...: 10/03/09

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 9278017						
Mercury	381	10.0	ug/L	SW846 7470A	10/05/09	LL0EX1AA
		Dilution Factor: 50				



Duke Energy Corporation

Client Sample ID: RIFB

TOTAL Metals

Lot-Sample #...: A9J030135-006

Matrix.....: WQ

Date Sampled...: 10/01/09 18:00 Date Received...: 10/03/09

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 9279165						
Mercury	ND	0.50	ng/L	CFR136A 1631E	10/05-10/12/09	LL0E01AA
		Dilution Factor: 1				

Duke Energy Corporation

Client Sample ID: RI

TOTAL Metals

Lot-Sample #...: A9J030135-007

Matrix.....: WG

Date Sampled...: 10/01/09 18:05 Date Received...: 10/03/09

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u> <u>LIMIT</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION-</u> <u>ANALYSIS DATE</u>	<u>WORK</u> <u>ORDER #</u>
Prep Batch #...: 9279201						
Mercury	2.3	0.50	ng/L	CFR136A 1631E	10/06-10/09/09	LL0E31AA
		Dilution Factor: 1				

Duke Energy Corporation

Client Sample ID: OUTFALL 002 FB

TOTAL Metals

Lot-Sample #...: A9J030135-008

Matrix.....: WQ

Date Sampled...: 10/01/09 18:20 Date Received...: 10/03/09

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u> <u>LIMIT</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION-</u> <u>ANALYSIS DATE</u>	<u>WORK</u> <u>ORDER #</u>
Prep Batch #...: 9279165						
Mercury	ND	0.50	ng/L	CFR136A 1631E	10/05-10/12/09	LL0E51AA
		Dilution Factor: 1				

Duke Energy Corporation

Client Sample ID: OUTFALL 002

TOTAL Metals

Lot-Sample #...: A9J030135-009

Matrix.....: WG

Date Sampled...: 10/01/09 18:30 Date Received...: 10/03/09

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u> <u>LIMIT</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION-</u> <u>ANALYSIS DATE</u>	<u>WORK</u> <u>ORDER #</u>
Prep Batch #...: 9279201						
Mercury	3.6	0.50	ng/L	CFR136A 1631E	10/06-10/09/09	LL0E61AA
		Dilution Factor: 1				

Duke Energy Corporation

Client Sample ID: OUTFALL 002 DUP

TOTAL Metals

Lot-Sample #...: A9J030135-010

Matrix.....: WG

Date Sampled...: 10/01/09 18:35 Date Received...: 10/03/09

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>WORK ORDER #</u>
Prep Batch #...: 9279201						
Mercury	3.8	0.50	ng/L	CFR136A 1631E	10/06-10/09/09	LL0E91AA
		Dilution Factor: 1				

Duke Energy Corporation

Client Sample ID: 608 WWT FB

TOTAL Metals

Lot-Sample #...: A9J030135-011

Matrix.....: WQ

Date Sampled...: 10/02/09 06:55 Date Received...: 10/03/09

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>WORK ORDER #</u>
Prep Batch #...: 9279201						
Mercury	0.89	0.50	ng/L	CFR136A 1631E	10/06-10/09/09	LL0FA1AA
		Dilution Factor: 1				

Duke Energy Corporation

Client Sample ID: 608 WWT

TOTAL Metals

Lot-Sample #...: A9J030135-012

Matrix.....: WG

Date Sampled...: 10/02/09 07:00 Date Received...: 10/03/09

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u> <u>LIMIT</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION-</u> <u>ANALYSIS DATE</u>	<u>WORK</u> <u>ORDER #</u>
Prep Batch #...: 9279201						
Mercury	79.2	5.0	ng/L	CFR136A 1631E	10/06-10/09/09	LL0FD1AA
		Dilution Factor: 10				

Duke Energy Corporation

Client Sample ID: 608 WWT DUP

TOTAL Metals

Lot-Sample #...: A9J030135-013

Matrix.....: WG

Date Sampled...: 10/02/09 07:05 Date Received...: 10/03/09

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>WORK ORDER #</u>
Prep Batch #...: 9279201						
Mercury	87.1	5.0	ng/L	CFR136A 1631E	10/06-10/09/09	LL0FE1AA
		Dilution Factor: 10				



Duke Energy Corporation

Client Sample ID: TB (TRIP BLANK)

TOTAL Metals

Lot-Sample #...: A9J030135-014

Matrix.....: WQ

Date Sampled...: 10/02/09

Date Received...: 10/03/09

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 9279165						
Mercury	ND	0.50	ng/L	CFR136A 1631E	10/05-10/12/09	LL0FF1AA
Dilution Factor: 1						

# *QUALITY CONTROL SECTION*

# METHOD BLANK REPORT

## TOTAL Metals

Client Lot #...: A9J030135

Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
MB Lot-Sample #: A9J050000-017 Prep Batch #...: 9278017						
Mercury	ND	0.20	ug/L	SW846 7470A	10/05/09	LL02T1A5
Dilution Factor: 1						
MB Lot-Sample #: A9J060000-165 Prep Batch #...: 9279165						
Mercury	ND	0.50	ng/L	CFR136A 1631E	10/05-10/06/09	LL2FC1AA
Dilution Factor: 1						
MB Lot-Sample #: A9J060000-201 Prep Batch #...: 9279201						
Mercury	ND	0.50	ng/L	CFR136A 1631E	10/06-10/07/09	LL2K61AA
Dilution Factor: 1						

### NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

# LABORATORY CONTROL SAMPLE EVALUATION REPORT

## TOTAL Metals

Client Lot #...: A9J030135

Matrix.....: WATER

<u>PARAMETER</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>WORK ORDER #</u>
LCS Lot-Sample#: A9J050000-017 Prep Batch #...: 9278017					
Mercury	107	(81 - 123)	SW846 7470A	10/05/09	LL02T1CC
		Dilution Factor: 1			
LCS Lot-Sample#: A9J060000-165 Prep Batch #...: 9279165					
Mercury	85	(77 - 125)	CFR136A 1631E	10/05-10/06/09	LL2FC1AC
		Dilution Factor: 1			
LCS Lot-Sample#: A9J060000-201 Prep Batch #...: 9279201					
Mercury	83	(77 - 125)	CFR136A 1631E	10/06-10/07/09	LL2K61AC
		Dilution Factor: 1			

### NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

# MATRIX SPIKE SAMPLE EVALUATION REPORT

## TOTAL Metals

Client Lot #...: A9J030135

Matrix.....: WATER

Date Sampled...: 10/01/09 17:00 Date Received...: 10/02/09

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
MS Lot-Sample #: A9J020203-002 Prep Batch #...: 9278017							
Mercury	103	(69 - 134)			SW846 7470A	10/05/09	LLWTC1C2
	104	(69 - 134)	0.84	(0-20)	SW846 7470A	10/05/09	LLWTC1C3
Dilution Factor: 1							

### NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

# MATRIX SPIKE SAMPLE EVALUATION REPORT

## TOTAL Metals

Client Lot #...: A9J030135

Matrix.....: WATER

Date Sampled...: 09/29/09 09:35 Date Received...: 10/01/09

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	LIMITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
MS Lot-Sample #: C9J010191-002 Prep Batch #...: 9279165							
Mercury	84	(71 - 125)			CFR136A 1631E	10/05-10/08/09	LLTGA1AT
	84	(71 - 125)	0.23	(0-24)	CFR136A 1631E	10/05-10/08/09	LLTGA1AU
Dilution Factor: 1							

### NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

# MATRIX SPIKE SAMPLE EVALUATION REPORT

## TOTAL Metals

Client Lot #...: A9J030135

Matrix.....: WATER

Date Sampled...: 09/30/09 13:15 Date Received...: 10/01/09

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	LIMITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
MS Lot-Sample #: A9J010253-003 Prep Batch #...: 9279165							
Mercury	79	(71 - 125)			CFR136A 1631E	10/05-10/13/09	LLT461AC
	75	(71 - 125)	3.8	(0-24)	CFR136A 1631E	10/05-10/13/09	LLT461AD
Dilution Factor: 1							

### NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

# MATRIX SPIKE SAMPLE EVALUATION REPORT

## TOTAL Metals

Client Lot #...: A9J030135

Matrix.....: WG

Date Sampled...: 10/01/09 18:05 Date Received...: 10/03/09

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	LIMITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
MS Lot-Sample #: A9J030135-007 Prep Batch #...: 9279201							
Mercury	79	(71 - 125)			CFR136A 1631E	10/06-10/09/09	LL0E31AC
	78	(71 - 125)	0.72	(0-24)	CFR136A 1631E	10/06-10/09/09	LL0E31AD
Dilution Factor: 1							

### NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.



# MATRIX SPIKE SAMPLE EVALUATION REPORT

## TOTAL Metals

Client Lot #...: A9J030135

Matrix.....: WG

Date Sampled...: 10/01/09 18:30 Date Received...: 10/03/09

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD LIMITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
MS Lot-Sample #: A9J030135-009 Prep Batch #...: 9279201						
Mercury	73	(71 - 125)		CFR136A 1631E	10/06-10/09/09	LL0E61AC
	72	(71 - 125)	0.20 (0-24)	CFR136A 1631E	10/06-10/09/09	LL0E61AD
Dilution Factor: 1						

### NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

**TestAmerica**  
THE LEADER IN ENVIRONMENTAL TESTING

THE LEADER IN ENVIRONMENTAL TESTING

Regulatory program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other

TestAmerica Laboratories, Inc.

TAL-0018 (1008)

## Chain of Custody Record

TestAmerica Laboratory location:

Regulatory program:

☐ DW☐ WPBS☐ RCRA☐ Other

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratory, Inc.

COC No:

2 of 2 COCs

Client Contact

Client Project Manager:

Site Contact:

Lab Contact:

Company Name:

Address:

Telephone:

Telephone:

City/State/Zip:

Email:

Telephone:

Telephone:

Phone:

Project Name:

Project Number:

Project Number:

Project Name:

Method of Sample Carrier:

Shipping/Tracking No:

Shipping/Tracking No:

Project Number:

Method of Sample Carrier:

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Shipping/Tracking No:

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Project Name:

Method of Sample Carrier:

Shipping/Tracking No:

Shipping/Tracking No:

**TestAmerica Cooler Receipt Form/Narrative**

 Lot Number: A93030135
**North Canton Facility**

 Client Duke Energy Project \_\_\_\_\_ By: [Signature]  
 Cooler Received on 10/3/09 Opened on 10/3/09 (Signature)

 FedEx ☒ UPS ☐ DHL ☐ FAS ☐ Stetson ☐ Client Drop Off ☐ TestAmerica Courier ☐ Other \_\_\_\_\_  
 TestAmerica Cooler # Q123 Multiple Coolers ☐ Foam Box ☐ Client Cooler ☐ Other \_\_\_\_\_

- Were custody seals on the outside of the cooler(s)? Yes ☒ No ☐ Intact? Yes ☒ No ☐ NA ☐  
 If YES, Quantity \_\_\_\_\_ Quantity Unsalvageable \_\_\_\_\_  
 Were custody seals on the outside of cooler(s) signed and dated? Yes ☒ No ☐ NA ☐  
 Were custody seals on the bottle(s)? Yes ☐ No ☒  
 If YES, are there any exceptions? \_\_\_\_\_
  - Shippers' packing slip attached to the cooler(s)? Yes ☒ No ☐
  - Did custody papers accompany the sample(s)? Yes ☒ No ☐ Relinquished by client? Yes ☒ No ☐
  - Were the custody papers signed in the appropriate place? Yes ☒ No ☐
  - Packing material used: Bubble Wrap ☒ Foam ☒ None ☐ Other \_\_\_\_\_
  - Cooler temperature upon receipt 17.5 °C See back of form for multiple coolers/temps ☐  
 METHOD: IR ☒ Other ☐  
 COOLANT: Wet Ice ☒ Blue Ice ☐ Dry Ice ☐ Water ☐ None ☐
  - Did all bottles arrive in good condition (Unbroken)? Yes ☒ No ☐
  - Could all bottle labels be reconciled with the COC? Yes ☒ No ☐
  - Were sample(s) at the correct pH upon receipt? Yes ☒ No ☐ NA ☐
  - Were correct bottle(s) used for the test(s) indicated? Yes ☒ No ☐ NA ☐
  - Were air bubbles >6 mm in any VOA vials? Yes ☐ No ☒ NA ☒
  - Sufficient quantity received to perform indicated analyses? Yes ☒ No ☐
  - Was a trip blank present in the cooler(s)? Yes ☐ No ☒ Were VOAs on the COC? Yes ☐ No ☒
- Contacted PM \_\_\_\_\_ Date \_\_\_\_\_ by \_\_\_\_\_ via Verbal ☐ Voice Mail ☐ Other ☐  
 Concerning \_\_\_\_\_

**14. CHAIN OF CUSTODY**

The following discrepancies occurred:

High Temp OK for metals.  
Received LHS Trip Blank, not on COC. Will log.  
(m)

**15. SAMPLE CONDITION**

Sample(s) \_\_\_\_\_ were received after the recommended holding time had expired.  
 Sample(s) \_\_\_\_\_ were received in a broken container.  
 Sample(s) \_\_\_\_\_ were received with bubble >6 mm in diameter. (Notify PM)

**16. SAMPLE PRESERVATION**

Sample(s) \_\_\_\_\_ were further preserved in Sample \_\_\_\_\_  
 Receiving to meet recommended pH level(s). Nitric Acid Lot# 031909-HNO<sub>3</sub>; Sulfuric Acid Lot# 100108-H<sub>2</sub>SO<sub>4</sub>; Sodium Hydroxide Lot# 100108 -NaOH; Hydrochloric Acid Lot# 092006-HCl; Sodium Hydroxide and Zinc Acetate Lot# 100108-(CH<sub>3</sub>COO)<sub>2</sub>ZN/NaOH. What time was preservative added to sample(s)? \_\_\_\_\_

Client ID	pH	Date	Initials
601(8)WWT	3.2	10/3/09	AP
601(7)WWT	3.2		
601(7)WWT B	3.2		

### North Canton Facility

[illegible]

***END OF REPORT***